Inundation Modeling Expert

Camp Springs, MD

I.M. Systems Group, Inc. (IMSG) (www.imsg.com) is looking for a unique individual with hydrodynamic modeling experience to support a NOAA team from the National Ocean Service (NOS) and National Weather Service (NWS) that is involved in porting NOS operational models to the NWS Operational High Performance Computing Environment.

The successful applicant will participate in projects to develop, improve and apply hydrodynamic models in estuarine and coastal waters. The applicant will also be responsible for the application and development of tools to evaluate model output including visualization and statistical measures of quality. Experience in numerical hydrodynamic water circulation modeling is required and experience in simulation of changes in water level and inundation (including tidal, storm surge, and sea level rise processes) is desirable. The preferred approach is through use of an unstructured grid model, such as ADCIRC, to simulate water level time series and fields.

A well-qualified applicant should have experience developing model applications of unstructured grid hydrodynamic models for coastal regions driven by water level and meteorological forcing. This includes models with grid refinement designed to capture important coastal features down to a few hundred meters or less. The candidate will participate in the development and evaluation of models of coastal storm surge inundation. Multiple projects are underway within NOAA to study state of the art hurricane storm surge models, including boundary condition specification and model accuracy.

The position will be filled initially by a one-year contract, with the high probability of additional years of support. This position is with the Marine Modeling and Analysis Programs branch of the Coast Survey Development Laboratory (NOS) in Silver Spring, Maryland and will involve both working there and in Camp Springs, MD at the National Centers for Environmental Prediction (NWS). The applicant will use a variety of existing programs and software and will develop new Unix, Linux, Fortran, C, and/or MATLAB software to handle unique problems. Work will be performed both by working alone and as a member of a team, using PCs, workstation, cluster, and high performance computers. Results will be written up in technical publications and may be presented at scientific meetings and workshops.

Education: Applicants should have either a Master's or Ph.D. degree in ocean science, earth science, or a related field, plus 3-5 years directly related experience.

To Apply: submit resume to jobs@imsg.com